

REMARKS

In the Office Action, the Examiner indicated Claims 1-11 are pending in the application and the Examiner rejected all claims.

Claim Rejections, 35 U.S.C. §103

On page 2 of the Office Action, the Examiner rejected claims 1-2, 4-7 and 9-11 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,903,850 to Huttunen et al (“Huttunen”) in view of U.S. Patent No. 5,343,319 to Moore (“Moore”).

On page 4 of the Office Action, the Examiner rejected claims 3 and 8 under 35 U.S.C. §103(a) as being unpatentable over Huttunen in view of Moore and further in view of U.S. Patent No. 5,628,055 to Stein (“Stein”).

The Present Invention

The present invention teaches an interface for operably connecting a radio card (e.g., a PCMCIA radio card) to a wireless terminal with a single two lead cable. The two-lead cable is capable of carrying both: (1) RF signals from the radio card to an antenna on the wireless terminal, and (2) radio status signaling from the radio card to a display on the wireless terminal. Specifically, claim 1 recites “a signal lead for carrying an RF signal from said radio to said antenna and from said antenna to said radio and for carrying a first baseband signal from said radio to said first visual indicator for activating said first visual indicator” (lines 6-8). The display on the wireless terminal includes visual indicators used to indicate to a user of the wireless terminal when the radio card is transmitting or receiving. Additionally, Claim 1

recites “a first visual indicator that provides a visual indication to a user of said wireless terminal when a radio is transmitting and stops providing said visual indication when said radio is receiving” (lines 3-5).

U.S. Patent No. 5,903,850 to Huttunen et al.

U.S. Patent No. 5,903,850 to Huttunen et al (“Huttunen”) teaches a mobile phone interface. A connection configuration is included in the mobile phone interface for connecting the mobile phone to external output and input signals that include external RF signals, external audio signals, control signals and data signals. These combined signals are carried over a signal coaxial line, and additional circuitry is included in the mobile phone interface for receiving and separating the signals carried on the coaxial line to isolate RF signals, control signals, etc. The Examiner acknowledges Huttunen fails to teach an indicator that provides to a user a visual indication when a radio is transmitting and stops providing the visual indication when the radio is receiving.

U.S. Patent No. 5,343,319 to Moore

U.S. Patent No. 5,343,319 to Moore (“Moore”) teaches an apparatus for coupling two communication devices wherein a first communication device utilizes an optical communications port and a second communication device utilizes an electrical communications port. The apparatus includes an electrical interface functionally compatible with the electrical communications port of the second device, and an optical interface functionally compatible with the optical communications port of the first device. The electrical and the optical

interfaces are then used to provide communication capabilities between the two devices. The Examiner relies on Moore for an alleged teaching of an indicator that provides to a user a visual indication when a radio is transmitting and stops providing the visual indication when the radio is receiving.

The Examiner has not Established a *prima facie* Case of Obviousness

As set forth in the MPEP:

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skilled in the art, to modify the reference or to combine reference teachings.

MPEP 2143

As discussed above, the present claimed invention includes a cable for carrying both RF signals as well as radio status signals from a PCMCIA radio card to a wireless device for transmission. This cable provides the advantage of being able to transfer RF signals from a PCMCIA card to the wireless terminal. Standard PCMCIA card connections (e.g., 68 pin connections) cannot carry RF signals and generally require additional complex cabling. By utilizing a single cable, the cost of both the wireless terminal and the radio card are reduced, and the difficulty of attaching the radio card to the cable is reduced as well. In addition to the cable, the present claimed invention teaches an indicator that provides to a user a visual indication when a radio is transmitting and stops providing the visual indication when the radio is receiving (claim 1), or conversely, a visual indicator that provides to a user a visual indication when a radio is receiving and stops providing the visual indication when the radio is transmitting (claim 6), or both (claim 11). These indicators provide a further advantage of

providing a user with a quick indication of the functionality of the radio card in connection with the wireless terminal for easy troubleshooting should any errors occur. These limitations, specifically providing visual indication to a user of the current functionality of the radio card, patentably define the present invention over the prior art, including Huttunen and Moore.

As discussed in previous responses (such as the response filed May 22, 2006), and upheld by the BPAI, Huttunen fails to teach or reasonably suggest providing visual indicators. This fact is acknowledged by the Examiner on page 2 of the outstanding Office Action. The discussion then shifts to whether Moore teaches this limitation.

Moore teaches an apparatus for coupling two communication devices, a first device utilizing an optical communications port and a second device utilizing an electrical communication port. This apparatus includes interfaces for connecting to the separate ports and providing a communication means between the two devices. The apparatus taught by Moore, however, fails to teach a “first visual indicator that provides a visual indication to a user of said wireless terminal when a radio is transmitting and stops providing said visual indication when said radio is receiving” as is specifically claimed by the present invention.

The Examiner cites column 3, lines 65-68 (describing optical transmitter 106 of Figure 1) as teaching providing a transmitting indicator. This citation specifically recites: “The optical interface 107 comprises an optical transmitter 106, such that as a conventional light emitting diode (LED) for optically transmitting data;” (column 3, lines 65-68). Here, it is clear the component being taught by Moore is not a visual indicator for providing a visual indication when a radio is transmitting, but rather is an optical transmitter for transmitting

data. Optical transmitters function by quickly producing pulses of light for detection by a receiving circuit. However, an optical transmitter is an internal component of an optical communication device, and does not provide a visual indication to a user. Nowhere does Moore teach or reasonably suggest that the optical transmitter could be used as a visual indicator for providing an indication to a user.

Additionally, the Examiner asserts that optical receiver 108 of Figure 1 (described in column 3, line 68 through column 4 line 2) is the same as the visual indicator claimed in claims 6 and 11. The optical receiver 108 of Moore is described as “a conventional photo diode, for optically receiving data” (column 1, lines 1-2). A photo diode does not produce any light, rather when it receives light it produces an electrical impulse. The optical receiver of Moore cannot function as the receiving visual indicator of the present invention as the optical receiver is incapable of producing a visual indication.

Since independent claims 1, 6 and 11 each specify a visual indicator, it is submitted that each of the independent claims (and any claims depending therefrom) are patentable over Huttunen in view of Moore, whether considered alone or in combination, and are in condition for allowance.

The addition of Stein does not render the claimed invention obvious. Stein fails to teach or suggest an indicator that provides to a user a visual indication when a radio is transmitting and stops providing the visual indication when the radio is receiving, or conversely, a visual indicator that provides to a user a visual indication when a radio is receiving and stops providing the visual indication when the radio is transmitting. Without such teaching or suggestion, the addition of Stein cannot render the claimed invention obvious.

For the reasons set forth above, the Examiner is respectfully requested to reconsider and withdraw the rejection of the claims 1-11 under 35 U.S.C. §103.

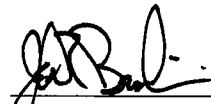
Conclusion

The present invention is not taught or suggested by the prior art. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of the claims. An early Notice of Allowance is earnestly solicited.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment associated with this communication to Deposit Account No. 19-5425.

Respectfully submitted,

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Date



John R. Brancolini
Registration No. 57,218

SYNNESTVEDT & LECHNER LLP
2600 ARAMARK Tower
1101 Market Street
Philadelphia, PA 19107
Telephone: (215) 923-4466
Facsimile: (215) 923-2189